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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,042	05/08/2001	Randy D. Petrea	5236	2161

7590 06/30/2003
Milliken & Company
P.O. Box 1927
Spartanburg, SC 29304

EXAMINER

GOLLAMUDI, SHARMILA S

ART UNIT	PAPER NUMBER
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1616

DATE MAILED: 06/30/2003

18

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/851,042

Applicant(s)

PETREA ET AL.

Examiner

Sharmila S. Gollamudi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 34 and 37-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 34 and 37-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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DETAILED ACTION

Receipt of Amendment D received on April 21, 2003 is acknowledged. Claims 34 and 37-46 are pending. Claims 21-33 and 35 are cancelled.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection based on Amendment D.

Claim Rejections - 35 USC § 103

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 34 and 37-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katsura et al (5,941,369) in view of Petrea et al (6,479,144).

Katsura discloses a polyurethane film of .3 mm thickness (11.8 mil) with silver-zirconium phosphate (Note example 1 and comparative example 2). Note that the cohesive properties are inherent although not explicitly stated.

Katsura does not specify the anti-tack properties of the polyurethane.

Petrea et al teach anti-tack spandex fibers containing antimicrobial agents. The polyurethane elastomer fibers contain silver-based antimicrobials such as zirconium phosphate, glass, or zeolite compounds. See column 1, lines 8-20. The polyurethane

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pellets are mixed with the antimicrobial substance and melt extruded. See examples. Petrea teaches the use of the silver-based microbials not only have excellent antimicrobial action but also have anti-tack benefit. This anti-tack property results from the antimicrobial particles present on the surface extend outward from the surface to prevent repeated and continuous contact between two polyurethanes. See column 5, lines 25-60. Therefore, the use of the instant microbials yields excellent anti-tack properties without additional additives.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to look at the teachings of Petrea et al and expect the same anti-tack properties. One would be motivated to do so since Petrea teaches the anti-tack properties silver-zirconium phosphate imparts on polyurethane due to its orientation and Katsura teaches the same antimicrobial in polyurethane; therefore a skilled artisan would ascertain Katsura's polyurethane would have the same property.

Claims 34 and 37-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krall et al (5976562) in view of JP 09002537 in further view of Petrea et al (6,479,144).

Krall et al disclose a polyurethane film of .25mm thickness with silver. The antimicrobial silver is embedded in and coated onto the polyurethane. (Note example and col. 2, lines 5-15). Krall et al does not include an organic bactericide or additives. Krall teaches the metal compounds are embedded in the plastic in the form of discrete particles. See column 2, lines 5-10. The instant cohesive properties of the film are inherent.

Krall et al do not teach silver based zirconium phosphate.

JP 09002537 teaches a container exhibiting antimicrobial property incorporating silver based zirconium phosphate. JP teaches silver based zirconium phosphate provides less discoloration and deterioration. The reference teaches resin such as polyurethane. (Note abstract)

Petrea et al teach anti-tack spandex fibers containing antimicrobial agents. The polyurethane elastomer fibers contain silver-based antimicrobials such as zirconium phosphate, glass, or zeolite compounds. See column 1, lines 8-20. The polyurethane pellets are mixed with the antimicrobial substance and melt extruded. See examples. Petrea teaches the use of the silver-based microbials not only have excellent antimicrobial action but also have anti-tack benefit. This anti-tack property results from the antimicrobial particles present on the surface extend outward from the surface to prevent repeated and continuous contact between two polyurethanes. See column 5, lines 25-60. Therefore, the use of the instant microbials yields excellent anti-tack properties without additional additives.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Krall et al and JP 09002537 since both teach silver-based polyurethane articles to provide an antibacterial effect. One would be motivated to use silver based zirconium phosphate since it provides less discoloration and deterioration as taught by JP 09002537.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to look at the teachings of Petrea et al and expect instant anti-tack

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properties from the use of silver-based antimicrobial compound. One would be motivated to do so since Petrea teaches the anti-tack properties silver-containing ion-exchange resins such as silver-zirconium phosphate impart on polyurethane due to its orientation when it is embedded into the polyurethane.

Claims 34 and 37-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-028797 in view of JP 09002537 in further view of Petrea et al (6,479,144).

JP teaches polyurethane film extruded with an antimicrobial agent, such as silver and antifungal agent (see page 3). The film is then coated onto a thermoplastic resin. The film has a thickness between 10-1000 microns and instant properties.

JP does not teach instant silver agent.

JP 09002537 teaches a container exhibiting antimicrobial property incorporating silver based zirconium phosphate. JP teaches silver based zirconium phosphate provides less discoloration and deterioration. The reference teaches resin such as polyurethane. (Note abstract)

Petrea et al teach anti-tack spandex fibers containing antimicrobial agents. The polyurethane elastomer fibers contain silver-based antimicrobials such as zirconium phosphate, glass, or zeolite compounds. See column 1, lines 8-20. The polyurethane pellets are mixed with the antimicrobial substance and melt extruded. See examples. Petrea teaches the use of the silver-based microbials not only have excellent antimicrobial action but also have anti-tack benefit. This anti-tack property results from the antimicrobial particles present on the surface extend outward from the surface to

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prevent repeated and continuous contact between two polyurethanes. See column 5, lines 25-60. Therefore, the use of the instant microbials yields excellent anti-tack properties without additional additives.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine JP 11-028797 and JP 09002537 since both teach silver-based polyurethane articles to provide an antibacterial effect. One would be motivated to use silver based zirconium phosphate since it provides less discoloration and deterioration as taught by JP 09002537.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to look at the teachings of Petrea et al and utilize the instant silver antimicrobial compound. One would be motivated to do so since Petrea teaches the anti-tack properties silver-containing ion-exchange resins such as silver-zirconium phosphate imparts on polyurethane due to its orientation when it is embedded in the polyurethane.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

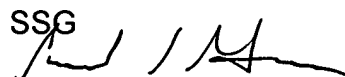
Correspondence

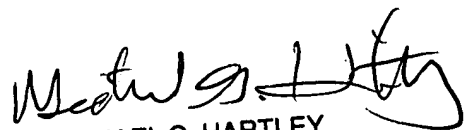
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharmila S. Gollamudi whose telephone number is (703) 305-2147. The examiner can normally be reached on M-F (7:30-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jose Dees can be reached on (703) 308-4628. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3014 for regular communications and (703) 305-3014 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

SSG


June 18, 2003


MICHAEL G. HARTLEY
PRIMARY EXAMINER